

FAQS

MID-BARATARIA SEDIMENT DIVERSION
FREQUENTLY ASKED QUESTIONS
LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY



LOUISIANA’S LAND LOSS CRISIS	01
SEDIMENT DIVERSIONS	03
THE MID-BARATARIA SEDIMENT DIVERSION	05
PROJECT TIMELINE AND PERMITTING PROCESS	08

LOUISIANA'S LAND LOSS CRISIS

WHAT IS HAPPENING TO LOUISIANA'S COASTLINE?

- Louisiana's coastal wetlands are some of the fastest disappearing land masses on earth. Since the 1930s, Louisiana has lost more than 2,000 square miles of land to the Gulf of Mexico. **The Barataria Basin has lost more than 276,000 acres of land (about 430 square miles) since the 1930s.** If we do nothing to address our land loss crisis, the Barataria Basin is expected to lose an additional 274,000 acres of land over the next 50 years.

WHY IS LOUISIANA FACING SUCH RAPID LAND LOSS?

- There are a number of reasons for this severe and detrimental loss of land, including:
 - Sea level rise
 - Subsidence, or land compression and sinking
 - Saltwater intrusion
 - Manmade contributions, like oil and gas canals and privately-owned projects
 - Side effects of our current levee system, which disconnects the Mississippi River from depositing its nutrients and sediment into our wetlands
 - Heavy oiling from the *Deepwater Horizon* oil spill, which as much as tripled land loss rates on Louisiana's coast

HOW DOES OUR LEVEE SYSTEM CONTRIBUTE TO COASTAL LAND LOSS?

- In 1927, Louisiana experienced the Mississippi River's most catastrophic and destructive flood, which included 145 levee breaks, 27,000 square miles of flooded land, hundreds of deaths, and countless communities destroyed. As a result, our current levee system and river control structures were built along the lower Mississippi River in the 1930s to prevent future flooding and damage to communities along the river. These actions permanently cut off the river and its land-building sediment from the deltas it previously sustained. Before the river was constrained, it flowed freely into the marshes, depositing silts and clays to build and sustain land.

WHY DO WE EVEN NEED TO RESTORE OUR COAST?

- Aside from being home to thousands of residents and a variety of wildlife, Louisiana's coast houses abundant natural resources, waterways, opportunities for work and recreation, and hundreds of billions of dollars in economic value. Loss of this vital resource would devastate not only Louisiana's economy, but that of our entire country.

- **Wildlife and fisheries sustainability:** 75% of Louisiana's commercial fin and shellfish species depend on our wetlands for spawning, nursery, and/or feeding habitat. Our wetlands also provide habitat for five million migratory waterfowl.
- **Economic benefits:** Our coast provides protection for infrastructure that supplies 90% of the nation's outer continental oil and gas production, 20% of the nation's annual waterborne commerce, and 26% (by weight) of the continental U.S.'s commercial fisheries landings.
- **Community and culture:** South Louisiana is home to 8 of 10 of the state's fastest growing communities and many of its most populated parishes.

WHAT IS THE SOLUTION TO OUR LAND LOSS PROBLEM?

- To address the root cause of the problem, we must "reconnect the river" and restore the natural processes that originally built our wetlands. The Mississippi River carries a steady supply of land-building nutrients and sediment. Through a sediment diversion built into our current levee system, we'll be able to strategically re-establish Mississippi River flow into the depleted basins, utilizing engineering with nature to deposit sediment, silts, and clays back into some of our most rapidly disappearing areas, like the Barataria Basin, and recreate a sustainable estuary.

WHAT HAPPENS IF WE DO NOTHING?

- As part of the state's Coastal Master Plan, the Coastal Protection and Restoration Authority (CPRA) also considered a "Future Without Action" scenario that predicts land change over the next 50 years if no more restoration or protection projects are implemented. This scenario is used to compare and prioritize restoration projects for funding and implementation within the plan.
- Louisiana could lose an additional 4,000 square miles of land over the next 50 years, resulting in nearly \$20 billion in annual damage and other costly side effects like loss of industry, navigation, and increased storm surge vulnerability and damage to our communities.

WHY CAN'T WE JUST DREDGE TO REBUILD OUR COAST?

- CPRA is dredging now more than ever, including several marsh creation projects in the Barataria Basin, and our Coastal Master Plan anticipates more dredging projects in the future. We have a number of tools and strategies to protect and rebuild Louisiana's coast; when implemented together, they provide a holistic approach to coastal restoration that is sustainable. Projects like sediment diversions extend the life span of adjacent wetlands, including those built by dredging projects. The science-based Coastal Master Plan confirms that implementing a variety of restoration techniques is the only way to effectively combat our land loss crisis. In addition, the Louisiana Trustee Implementation Group, a group of coordinating federal and state agencies responsible for overseeing the use of the *Deepwater Horizon* natural resource damages settlement dollars allocated to Louisiana, have, determined that a combination of large scale marsh creation projects and a large scale sediment diversion is the best way to restore the natural resources in Barataria Basin that were injured by the oil spill.
- Dredging can provide critical short-term benefits and protection to our coast, and CPRA intends to continue prioritizing and implementing dredging projects. However, dredging alone does not fully address the root cause of our land loss. Dredging to create land or marsh is not a natural process, does not provide the same level of sustainability as a sediment diversion can, and is not equally effective across the coast.
- Sediment diversions, on the other hand, are designed to capture a steady stream of suspended sediment and nutrients flowing in the river and deposit it into adjacent basins, recreating the natural processes that built our coast in the first place and creating sustainable wetlands to provide a long-term solution. Sediment diversions can also extend the life of marsh created through dredging by providing an ongoing sediment supply to nourish the marsh.

SEDIMENT DIVERSIONS

WHAT IS A SEDIMENT DIVERSION?

- A sediment diversion is a structure designed to harness sediment from river water and deposit it into our disappearing wetlands. Sediment diversions are composed of a controlled, gated system that aligns with the levee, an inlet structure in the river to capture sediment, and a manmade canal that delivers diverted sediment into the basin.

WILL SEDIMENT DIVERSIONS EVEN BUILD LAND?

- Yes! Modeling results indicate the Mid-Barataria Sediment Diversion will deliver five to seven million tons of sand, silt, and clay on average annually and has the potential to build between 13,000 and 26,000 acres of land in 50 years of operation. At that point, about 20% of the wetlands in the Barataria Basin will only be there because of the Mid-Barataria Sediment Diversion.

ARE THERE ANY REAL-WORLD EXAMPLES OF A SEDIMENT DIVERSION?

- While no structures exactly like the proposed Mid-Barataria Sediment Diversion currently exist, the science can be seen in action along our coast through several natural and small-scale diversions.

- Since the mid-1980s, the state of Louisiana has worked with federal partners, under the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Program, to build crevasses, or small breaks in the natural levee, that have deposited sediment and created land across the Mississippi River delta. In 2003, CPRA and the U.S. Army Corps of Engineers (USACE) constructed an uncontrolled sediment diversion at West Bay to restore wetlands in an area that was seeing rapid land loss on the lower Mississippi River. While the crevasses and West Bay diversion are uncontrolled and smaller than the proposed Mid-Barataria Sediment Diversion, their land building performance provides examples of the benefits of diverting sediment from the Mississippi River.

IS THERE ENOUGH SEDIMENT IN THE MISSISSIPPI RIVER FOR SEDIMENT DIVERSIONS TO WORK?

- Yes. The average load of suspended sediment in the Mississippi River is over 400,000 tons per day, providing a renewable resource that can be harnessed through a sediment diversion to build land.
- Additionally, CPRA has completed extensive and continuous surveys and sediment sampling within the lower river and at the proposed project location to inform engineering and design efforts. The program team uses real, first-hand data on sediment availability, collected by experts over the last 10 to 15 years.

ARE SEDIMENT DIVERSIONS JUST “OPEN CUTS IN THE LEVEE” OR FREE-FLOWING STRUCTURES THAT WILL DUMP UNCONTROLLABLE RIVER WATER INTO THE BASINS?

- No. A sediment diversion's design includes a controlled, gated system that aligns with the levee, an inlet structure in the river to capture sediment, and a manmade canal that delivers diverted sediment into the basin. This controlled design allows for CPRA to close the sediment diversion structure when environmental conditions do not warrant operations due to safety, river stage, or other environmental factors.

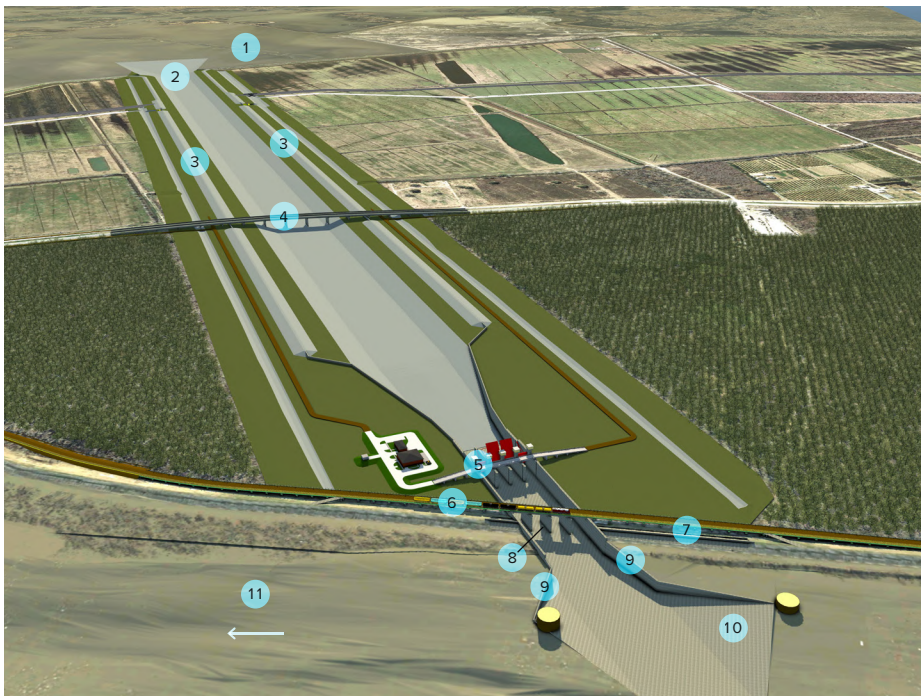
HOW DO YOU KNOW THIS SEDIMENT DIVERSION WILL EVEN WORK?

- The project's engineering and design is backed by decades of research and rooted in the best available science, including modeling and real-world data collected from the Mississippi River.

WILL THE OPERATION OF A SEDIMENT DIVERSION HAVE IMPACTS SIMILAR TO THE OPERATION OF THE BONNET CARRÉ SPILLWAY DURING HIGH-RIVER YEARS?

- No. Structures like the Bonnet Carré Spillway are designed, built, and operated specifically as emergency flood protection structures to take pressures off the levee system. USACE evaluates and monitors flood threat along the lower Mississippi River as part of its flood control strategy, which involves using spillways that move river water into catch basins and out into the Gulf of Mexico.
- This flood control function is fundamentally different than the purpose of a sediment diversion, which is to maximize land-building potential by capturing and delivering sediment from the Mississippi River to build marsh. Flood control structures can flow at much higher rates (200,000 to 300,000 cfs) than the Mid-Barataria Sediment Diversion (max 75,000 cfs).

THE MID-BARATARIA SEDIMENT DIVERSION



- 1 BARATARIA BASIN
- 2 OUTFALL TRANSITION
- 3 CHANNEL GUIDE LEVEES
- 4 HWY 23 BRIDGE
- 5 GATED STRUCTURE
- 6 RAILROAD ACCESS BRIDGE
- 7 MISSISSIPPI RIVER LEVEE
- 8 U-FRAME INTAKE STRUCTURE
- 9 U-FRAME TRAINING WALLS
- 10 INTAKE ARMORING
- 11 MISSISSIPPI RIVER

WHERE IS THE PROPOSED PROJECT SITE FOR THE MID-BARATARIA SEDIMENT DIVERSION?

- River mile 61, near Ironton, LA.

WHO IS PAYING FOR THE PROJECT?

- The proposed funding source for the project is settlement dollars allocated to Louisiana through the *Deepwater Horizon* natural resource damages settlement.

HOW DID CPRA DECIDE ON THE LOCATION FOR THE MID-BARATARIA SEDIMENT DIVERSION?

- The Barataria Basin is facing some of the most aggressive and widespread rates of coastal land loss in the world. The basin was also the estuary most heavily oiled by the *Deepwater Horizon* oil spill. For these reasons, and after extensive evaluation, the Barataria Basin has been selected as a priority area for restoration efforts.

WHO WILL OPERATE THE PROJECT?

- Once constructed, CPRA intends to operate the project under an adaptive management plan that is available for public input and comment.

WHEN WILL THE PROJECT BE BUILT?

- The current project timeline estimates a Record of Decision from USACE in late 2022. If the permit is granted to construct the project, construction is estimated to start in 2023.

WHAT ARE THE BENEFITS OF THE PROJECT?

- The project brings numerous benefits to the surrounding environment in the Barataria Basin, as well as benefits that extend into the Northern Gulf of Mexico and into communities in Jefferson, Orleans, and Plaquemines Parishes.
- These benefits include:
 - **Land Building:** The Mid-Barataria Sediment Diversion has the capability to build and sustain an estimated 13,000 to 26,000 acres (about 20 to 40 square miles) of wetlands, depending on the rate of future sea level rise.
 - **Benefits to Wildlife, Animals, and Aquatic Species:** Re-establishing the natural processes and flow into the Barataria Basin would create a productive and sustainable basin by restoring and stabilizing a degrading estuary.
 - **Storm Surge and Storm Protection:** Wetlands in the Barataria Basin that would be created and sustained by the project would help to push back storm surge and reduce wave impacts in portions of Jefferson, Orleans, and Plaquemines Parishes.
 - **Economic Benefits:** The Mid-Barataria Sediment Diversion is expected to create a significant regional economic boom for Plaquemines Parish and beyond, including billions in sales revenues, as well as millions in increased annual income and local government revenue. The project would also bring hundreds to thousands of new jobs in the construction industry, as well as increased revenue to local vendors and suppliers.

WHY CAN'T YOU PUT THE MID-BARATARIA SEDIMENT DIVERSION FURTHER DOWN THE MISSISSIPPI RIVER?

- The project location was selected after extensive research and analysis to consider things like river power, sediment availability, and marsh sustainability by location; it allows for maximum wetland benefits.
- The project is specifically designed to maintain and sustain land in the Barataria Basin, as this area is facing extreme rates of land loss. Placing the project further down the river would deposit sediment into a deeper area, making it much more difficult to retain and maintain, reducing benefits.
- CPRA is committed to working with communities near the project site to implement strategies that mitigate any negative impacts the project may have, like increased water levels, before, during, and after construction.

IF THE PROJECT WILL NEGATIVELY IMPACT THE SEAFOOD SPECIES IN THE BARATARIA BASIN, WHAT IS YOUR PLAN TO ADDRESS THOSE IMPACTS TO THE INDUSTRY?

- Due to sea level rise and changing estuarine conditions, the oyster and brown shrimp industries can expect to continue facing major impacts with or without the project. However, CPRA recognizes that the Mid-Barataria Sediment Diversion would accelerate the timing of some of those impacts and has worked with industry representatives, leaders, and stakeholders to develop a number of actions intended to address them. These measures include things like:
 - Establish new public seed grounds in suitable areas of the Barataria Basin
 - Provide cultch material to enhance oyster growing areas
 - Enhance oyster broodstock reefs
 - Funding for Alternative Oyster Culture initiatives
 - Funding marketing programs and communication initiatives to promote buying Louisiana oysters and brown shrimp

- Funding for vessel refrigeration upgrades and other gear or equipment upgrades
- Facilitate workforce and business training to enhance business revenue
- Workforce training to assist transition to new employment, industry, or market

THE PROJECT HAS BEEN DEVELOPED AND WILL BE OPERATED USING A STRATEGY KNOWN AS “ADAPTIVE MANAGEMENT.” WHAT DOES THIS MEAN?

- Adaptive management is a scientific process that encourages an integrated and flexible approach to land and water management. It reduces the uncertainty associated with complex programs through regular system monitoring and evaluation.
- CPRA has released a monitoring and adaptive management plan to guide the proposed sediment diversion's operational plans. This includes monitoring the structure, environment, Mississippi River conditions, and multiple other factors. This information will be used to continually evaluate and “adapt” operational plans and implement necessary changes to respond to seasonal, sediment, and environmental conditions to both maximize the benefits of sediment transport and, to the extent practical, reduce negative environmental impacts.

HOW WILL THESE PROJECTS BE OPERATED?

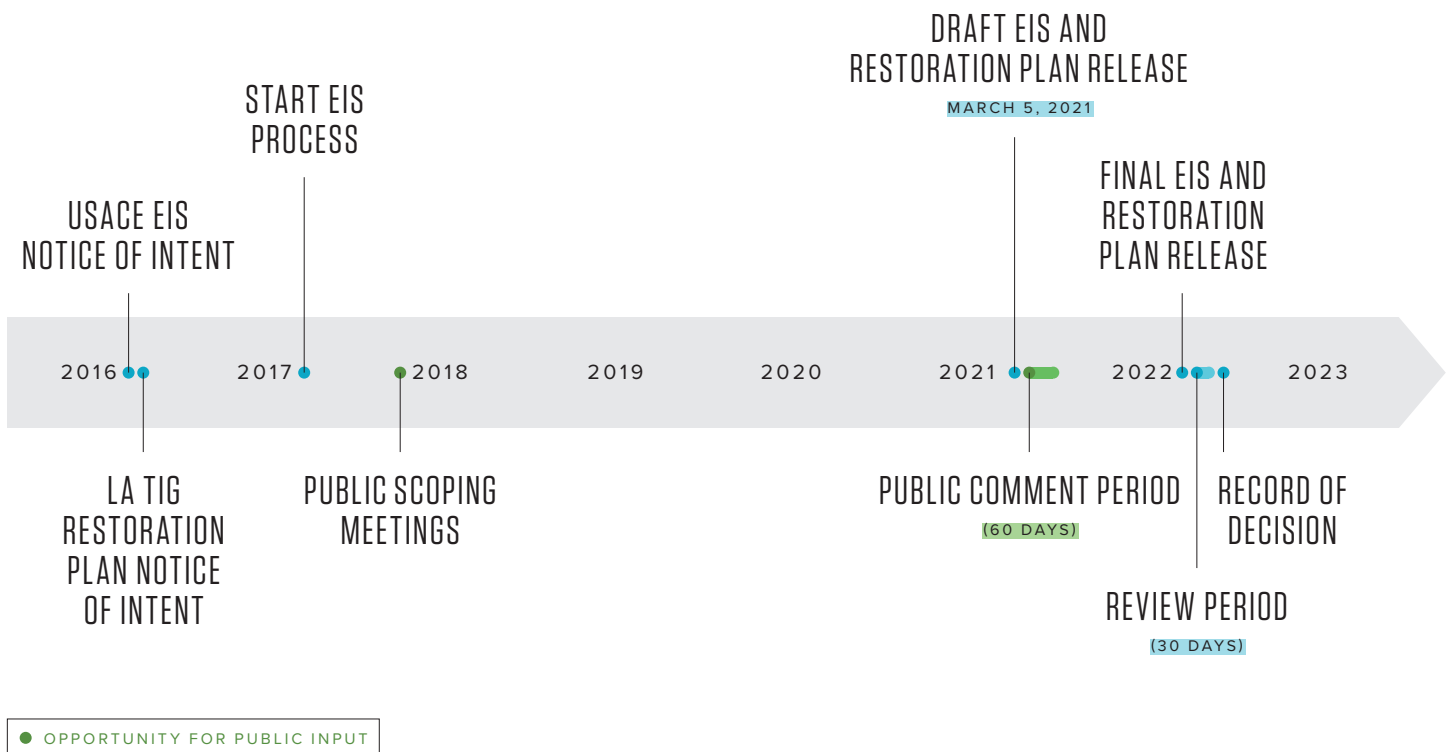
- Operations are anticipated to take advantage of the Mississippi River high flows when sediment concentrations are the richest.
- The proposed operations plan for the Mid-Barataria Sediment Diversion envisions the gates in the structure opening when the Mississippi River reaches a discharge of 450,000 cubic feet per second (cfs) at Belle Chasse. When the Mississippi River drops below 450,000 cfs, the diversion gates would mostly close, only allowing a base flow of up to 5,000 cfs to sustain both existing and newly created wetlands.

- While the sediment diversion structure will enable a maximum capacity of up to 75,000 cfs, that flow rate will only occur when the River flows at over 1,000,000 CFS. Typical operations of the structure are anticipated to be at a discharge between 30,000 and 50,000 cfs, depending upon the natural power of the Mississippi River and the head differential.

WILL THE MID-BARATARIA SEDIMENT DIVERSION ELIMINATE FISH, SEAFOOD, AND OTHER MARINE LIFE AND SPECIES?

- No, fish, seafood, and other marine species will continue to live in the Barataria Basin. By reintroducing sediment, nutrients, and freshwater into the basin, the project would re-establish a more sustainable system – similar to the way the Barataria Basin functioned before the Mississippi River was leveed. This sustainable system would support healthy marsh and other habitats, including submerged aquatic grasses, that are important for a variety of seafood, fish, and marine species that could be lost without the project. However, we know that re-establishing a large connection with the Mississippi River will modify current salinity conditions and negatively impact some species in the basin.
- The DEIS details specific negative impacts to marine mammals, brown shrimp, and oysters – all of which have stewardship measures aimed at addressing those impacts included in the Draft Mitigation and Stewardship Plan.
- Currently, Louisiana's marine species are under tremendous stress. If nothing is done to protect and restore the estuary they live in, conditions in the Barataria Basin will continue to decline until collapse.

PROJECT TIMELINE AND PERMITTING PROCESS



WHAT DOES THE PERMITTING PROCESS FOR THE PROJECT LOOK LIKE?

- Before CPRA can construct the Mid-Barataria Sediment Diversion, it will need to obtain several permits and authorizations from various governmental agencies. As part of this process, USACE is leading an environmental review of the Mid-Barataria Sediment Diversion under the National Environmental Policy Act (NEPA).
- NEPA requires agencies to consider the environmental benefits and impacts of that project when making a decision to permit or fund a project, as well as reasonable alternatives to the project.
- USACE has prepared an a Draft Environmental Impact Statement (DEIS) under NEPA that evaluates the benefits and impacts of the proposed Mid-Barataria Sediment Diversion.

WHAT IS A DRAFT ENVIRONMENTAL IMPACT STATEMENT?

- Part of the permitting and NEPA compliance process for complex projects includes developing an EIS, which is a detailed analysis of how specific environmental resources and elements may be benefitted or impacted by a project.
- The EIS requires disclosure and discussion of the significant environmental benefits and impacts that may result from project construction and operation, as well as examining a reasonable range of alternatives and opportunities to avoid or minimize any adverse impacts. The list of resources evaluated is extensive and includes measuring potential impacts to noise, air quality, water quality, commercial fisheries, essential fish habitat, marine mammals, navigation, and threatened and endangered species – to name a few.

WHAT IS A DRAFT RESTORATION PLAN?

- The Draft Restoration plan is a document developed by the Louisiana Trustee Implementation Group (LA TIG) that provides recommendation for funding construction of the Mid-Barataria Sediment Diversion, based on the information provided in the DEIS and a separate analysis conducted under the Oil Pollution Act (OPA).

WHAT IS THE LA TIG?

- The Louisiana Trustee Implementation Group (LA TIG) is a group of coordinating federal and state agencies responsible for overseeing the use of the *Deepwater Horizon* natural resource damages settlement dollars allocated to Louisiana. The LA TIG includes the National Oceanic and Atmospheric Administration (NOAA), Department of the Interior (DOI), U.S. Environmental Protection Agency (EPA), the U.S. Department of Agriculture (USDA), and the state of Louisiana. The state of Louisiana is represented by CPRA, Louisiana Oil Spill Coordinator's Office (LOSCO), Louisiana Department of Wildlife and Fisheries (LDWF), LA Department of Natural Resources (LDNR), and LA Department of Environmental Quality (LDEQ).

WHEN CAN THE PUBLIC SHARE INPUT ON IF OR HOW THE MID-BARATARIA SEDIMENT DIVERSION IS BUILT?

- There are two opportunities for official public input on the Mid-Barataria Sediment Diversion as a part of the NEPA process: The public scoping meetings, held in 2017, and the DEIS public comment period, which begins March 5, 2021 and lasts for 60 days and includes a series of public meetings.
- The LA TIG will also publish its Draft Restoration Plan for public comment on March 5. The public comment period for that Plan will also be 60 days, and the DEIS public meetings will also include an opportunity to comment on the Draft Restoration Plan.
- In addition to these official opportunities for public input, CPRA has held over 200 meetings and engaged with thousands of stakeholders to discuss project progress and get feedback. This information has been used to inform the project's engineering and design processes.





@LOUISIANACPRA

WWW.COASTAL.LA.GOV

